AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Previously Presented) A system for integrating a fiber optic fixed access network and a fiber optic radio access network, comprising:

at least one radio unit that transmits and receives radio unit communications with at least one mobile unit;

a first passive wavelength multiplexer that transmits and receives the radio unit communications with the at least one radio unit, and transmits and receives fixed access communications with at least one fixed access subscriber,

wherein the first passive wavelength multiplexer is connected to each of the at least one radio unit and to each of the at least one fixed access subscriber using fiber optic connections,

wherein each of the at least one radio unit transmits and receives the radio unit communications with the first passive wavelength multiplexer using a wavelength that is different for each of the at least one radio unit and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber, and

wherein the first passive wavelength multiplexer passively multiplexes the radio unit communications and the fixed access communications onto a fiber optic communications link; and

a second passive wavelength multiplexer connected to the first multiplexer through the fiber optic communications link, wherein the radio unit communications and the fixed access communications are transmitted and received together between the first passive wavelength multiplexer and the second passive wavelength multiplexer through the fiber optic communications link using the different wavelengths.

2. (Previously Presented) The system according to claim 1, further comprising:

at least one main unit, connected to the second passive wavelength multiplexer, for transmitting and receiving the radio unit communications with the second passive wavelength multiplexer and with a radio network.

3. (Previously Presented) The system according to claim 1, further comprising:

means for distributing a reference clock signal through the fiber optic fixed access network at a wavelength that is different from that used to transmit and receive the radio unit communications with each of the at least one radio unit and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber.

4. (Previously Presented) The system according to claim 1, wherein the first and second passive wavelength multiplexers are implemented in Ethernet switches.

5. (Previously Presented) The system according to claim 4, wherein the passive wavelength multiplexers perform optical coarse wavelength division multiplexing.

6. (Previously Presented) The system according to claim 5, wherein the radio unit communications and the fixed access communications are transmitted and received together between the first passive wavelength multiplexer and the second passive wavelength multiplexer using a fiber pair in the fiber optic fixed access network.

7. (Previously Presented) A system for integrating a fiber optic fixed access network and a fiber optic radio access network, comprising:

at least one radio unit for transmitting and receiving radio unit communications with at least one mobile unit;

a first passive wavelength multiplexer for transmitting and receiving the radio unit communications with the at least one radio unit and fixed access communications with at least one fixed access subscriber,

wherein the first passive wavelength multiplexer is connected to each of the at least one radio unit and to each of the at least one fixed access subscriber using fiber optic connections,

wherein each of the at least one radio unit transmits and receives the radio unit communications with the first passive wavelength multiplexer using a wavelength that is the same for each of the at least one radio unit, and

wherein the first passive wavelength multiplexer converts the radio unit communications with each of the at least one radio unit into wavelengths that are different for each of the least one radio unit and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber prior to passively multiplexing the radio unit communications and the fixed access communications onto a fiber optic communications link; and

a second passive wavelength multiplexer connected to the first multiplexer through the fiber optic communications link, wherein the radio unit communications and the fixed access communications are transmitted and received together between the first passive wavelength multiplexer and the second passive wavelength multiplexer through the fiber optic fixed access network using the different wavelengths.

8. (Previously Presented) The system according to claim 7, further comprising:

at least one main unit, connected to the second passive wavelength multiplexer, for transmitting and receiving the radio unit communications with the second passive wavelength multiplexer and with a radio network.

9. (Previously Presented) The system according to claim 7, further comprising:

means for distributing a reference clock signal through the fiber optic fixed access network at a wavelength that is different from that used to transmit and receive

the radio unit communications between each of the at least one radio unit and the first passive wavelength multiplexer and between the first passive wavelength multiplexer and the second passive wavelength multiplexer and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber.

10. (Previously Presented) The system according to claim 7, wherein the first and second passive wavelength multiplexers are implemented in Ethernet switches.

11. (Previously Presented) The system according to claim 10, wherein the passive wavelength multiplexers perform optical coarse wavelength division multiplexing.

12. (Previously Presented) The system according to claim 11, wherein the radio unit communications and the fixed access communications are transmitted and received together between the first passive wavelength multiplexer and the second passive wavelength multiplexer using a fiber pair in the fiber optic fixed access network.

13. (Previously Presented) A system for integrating a fiber optic fixed access network and a fiber optic radio access network, comprising:

a first passive wavelength multiplexer, comprising:

a radio access unit for transmitting and receiving radio unit user communications with at least one radio unit;

a fixed access unit for transmitting and receiving fixed access user communications with fixed access users; and

a passive multiplexer unit for passively multiplexing the radio unit user communications and the fixed access user communications onto a fiber optic communications link; and

a second passive wavelength multiplexer that receives the multiplexed communications from the first multiplexer, passively de-multiplexes the multiplexed communications, and transmits the fixed access user communications to a fixed access

network and transmits the radio unit user communications to a radio network component.

14. (Previously Presented) The system according to claim 13, wherein each of the at least one radio unit transmits and receives the radio unit user communications with the first passive wavelength multiplexer using a wavelength that is different for each of the at least one radio unit and different from that used to transmit and receive the fixed access user communications with the fixed access communications network.

15. (Previously Presented) The system according to claim 13, wherein each of the at least one radio unit transmits and receives the radio unit user communications with the first passive wavelength multiplexer using a wavelength that is the same for each of the at least one radio unit, and wherein the radio access unit in the first passive wavelength multiplexer converts the radio unit user communications into wavelengths that are different for each of the least one radio unit and different from that used to transmit and receive the fixed access user communications with the fixed access communications network prior to passively multiplexing the radio unit user communications and the fixed access user communications onto the fiber optic communications link.

16. (Previously Presented) The system according to claim 13, wherein the first and second multiplexers are passive wavelength multiplexers implemented in Ethernet switches.

17. (Previously Presented) The system according to claim 16, wherein the passive wavelength multiplexers perform optical coarse wavelength division multiplexing.

18. (Previously Presented) The system according to claim 17, wherein the radio unit user communications and the fixed access user communications are transmitted and received together between the first passive wavelength multiplexer and

the second passive wavelength multiplexer using a fiber pair in the fiber optic fixed access network.

19. (Previously Presented) A method of integrating a fiber optic fixed access network and a fiber optic radio access network, comprising the steps of:

transmitting and receiving radio unit communications between at least one radio unit and a first passive wavelength multiplexer via fiber optic connections,

wherein the first passive wavelength multiplexer also transmits and receives fixed access communications with at least one fixed access subscriber, and

wherein the radio unit communications transmitted and received with each of the at least one radio unit are transmitted and received with the first passive wavelength multiplexer using a wavelength that is different for each of the at least one radio unit and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber;

passively multiplexing the radio unit user communications and the fixed access user communications onto a fiber optic communications link in the fixed access network; and

transmitting and receiving together the radio unit communications and fixed access communications between the first passive wavelength multiplexer and a second passive wavelength multiplexer through the fiber optic fixed access network using the different wavelengths.

20. (Previously Presented) The method according to claim 19, further comprising the step of:

transmitting and receiving the radio unit communications between the second passive wavelength multiplexer and at least one main unit connected to the second passive wavelength multiplexer and to a radio network.

21. (Previously Presented) The method according to claim 19, further comprising the step of:

distributing a reference clock signal through the fiber optic fixed access network at a wavelength that is different from that used to transmit and receive the radio unit communications with each of the at least one radio unit, and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber.

22. (Previously Presented) The method according to claim 19, wherein the first and second passive wavelength multiplexers are implemented in Ethernet switches.

23. (Previously Presented) The method according to claim 22, wherein the passive wavelength multiplexers perform optical coarse wavelength division multiplexing.

24. (Previously Presented) The method according to claim 23, wherein the communications and the fixed access communications are transmitted and received together between the first passive wavelength multiplexer and the second passive wavelength multiplexer using a fiber pair in the fiber optic fixed access network.

25. (Previously Presented) A method of integrating a fiber optic fixed access network and a fiber optic radio access network, comprising the steps of:

transmitting and receiving radio unit communications between at least one radio unit and a first passive wavelength multiplexer via fiber optic connections,

wherein the first passive wavelength multiplexer also transmits and receives fixed access communications with at least one fixed access subscriber, and

wherein the radio unit communications transmitted and received with each of the at least one radio unit are transmitted and received with the first passive wavelength multiplexer using a wavelength that is the same for each of the at least one radio unit;

converting, in the first passive wavelength multiplexer, the radio unit communications with each of the at least one radio unit into wavelengths that are

different for each of the least one radio unit and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber;

passively multiplexing the radio unit user communications and the fixed access user communications onto a fiber optic communications link in the fixed access network; and

transmitting and receiving together the radio unit communications and fixed access communications between the first passive wavelength multiplexer and a second passive wavelength multiplexer through the fiber optic fixed access network using the different wavelengths.

26. (Previously Presented) The method according to claim 25, further comprising the step of:

transmitting and receiving the radio unit communications between the second passive wavelength multiplexer and at least one main unit connected to the second passive wavelength multiplexer and to a radio network.

27. (Previously Presented) The method according to claim 25, further comprising the step of:

distributing a reference clock signal through the fiber optic fixed access network at a wavelength that is different from that used to transmit and receive the radio unit communications between each of the at least one radio unit and the first passive wavelength multiplexer and between the first passive wavelength multiplexer and the second passive wavelength multiplexer, and different from that used to transmit and receive the fixed access communications with the at least one fixed access subscriber.

28. (Previously Presented) The method according to claim 25, wherein the first and second passive wavelength multiplexers are implemented in Ethernet switches.

29. (Previously Presented) The method according to claim 28, wherein the passive wavelength multiplexers perform optical coarse wavelength division multiplexing.

30. (Previously Presented) The method according to claim 29, wherein the radio unit communications and the fixed access communications are transmitted and received together between the first passive wavelength multiplexer and the second passive wavelength multiplexer using a fiber pair in the fiber optic fixed access network.